

WHAT IS CLAIMED IS:

1. A printed wiring board, comprising:
an insulating layer having a first surface and
a second surface located on the opposite side of said
first surface;

a plurality of wiring layers formed so as to
correspond to a predetermined circuit pattern, said
wiring layers being formed by etching metal foils
laminated on said first surface and said second surface
of said insulating layer, respectively;

a via formed on said insulating layer, said via
having one end opened on said first surface of said
insulating layer and the other end closed by said
wiring layer formed on said second surface of said
insulating layer;

a first plating layer, said first plating layer
continuously covering said inner surface of said via,
said wiring layer formed on said second surface exposed
within said via and that portion of the wiring layer
which is formed on said first surface and which faces
one end of said via; and

a second plating layer, said second plating
layer being laminated on said first plating layer,
electrically connecting said wiring layer formed on
said first surface and said wiring layer formed on said
second surface by cooperating with said first plating
layer.

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surface and said wiring layer inside of said insulating layer by cooperating with said first plating layer.

42. 5. The printed wiring board according to claim 4, wherein said first plating layer is a conductive substrate.

6. The printed wiring board according to claim 4, wherein said laminate has flexibility.

10 7. A method of manufacturing said printed wiring board including said insulating layer having said first surface and said second surface located on the opposite side of said first surface and a plurality of wiring layers formed so as to correspond to a predetermined circuit pattern, said method comprising:

15 a first step of forming said wiring layers on said first and second surfaces of said insulating layer, respectively;

20 a second step of forming said via one end of which is opened on said first surface and the other end of which is closed by said wiring layer on said second surface;

a third step of covering said second surface of said insulating layer and said wiring layer formed on said second surface with a first plating resist;

25 a fourth step of continuously covering said inner surface of said via, said wiring layer on said second surface exposed within said via and said wiring layer on said first surface with said first plating layer;

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5 a fifth step of covering a region other than
a portion where one end of said via is opened out of
said first surface of said insulating layer as well as
said wiring layer on said first surface with said
second plating resist;

10 a sixth step of laminating said second plating
layer on said first plating layer, and electrically
connecting said wiring layer on said first surface and
said wiring layer on said second surface by said first
and second plating layers;

a seventh step of removing said first and second
plating resists after an electrical connection is
completed between said wiring layers; and

15 an eighth step of removing said first plating
layer exposed on said first surface of said insulating
layer along with the removal of said second plating
resist.

20 8. The method of manufacturing a printed wiring
board according to claim 7, wherein in said second
step, said via is formed by irradiating a laser at
a position other than said wiring layer out of said
first surface of said insulating layer, and said
insulating layer is scraped off in the direction from
said first surface to said second surface.

25 9. The method of manufacturing a printed wiring
board according to claim 7, wherein in said eighth
step, said first plating layer is removed by etching.

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10. A method of manufacturing a printed wiring board, said method comprising:

5 a first step of obtaining said laminate having said insulating layer having said first surface and said second surface located on the opposite side of said first surface and a plurality of wiring layers laminated on said first surface and said second surface of said insulating layer and inside of said insulating layer and formed so as to correspond to a predetermined circuit pattern;

10 a second step of forming said via said one end of which is opened on said first surface of said insulating layer and the other end of which is closed by said wiring layer inside of said insulating layer on said laminate;

15 a third step of covering said second surface of said insulating layer and said wiring layer laminated on said second surface with said first plating resist;

20 a fourth step of continuously covering said inner surface of said via, said wiring layer inside of said insulating layer exposed within said via and said wiring layer on said first surface of said insulating layer with said first plating layer;

25 a fifth step of covering a region other than a portion where one end of said via is opened out of said first surface of said insulating layer as well as said wiring layer on said first surface with said

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second plating resist;

5 a sixth step of laminating said second plating layer on said first plating layer, and electrically connecting said wiring layer on said first surface and said wiring layer inside of said insulating layer by said first and second plating layers;

a seventh step of removing said first and second plating resists after an electric connection is completed between said wiring layers; and

10 an eighth step of removing said first plating layer exposed on said first surface of said insulating layer along with the removal of said second plating resist.

11. A method of manufacturing said printed wiring board including insulating layer having first surface and second surface located on the opposite side of said first surface and a plurality of wiring layers formed so as to correspond to a predetermined circuit pattern, said method comprising:

20 a first step of forming said wiring layers on said first and second surfaces of said insulating layer;

a second step of forming said via one end of which is opened on first surface and the other end of which is closed by said wiring layer on said second surface on said insulating layer;

25 a third step of covering said second surface of said insulating layer, a region other than a portion

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where one end of said via out of said first surface of said insulating layer as well as said wiring layers on said first and second surfaces with said plating resist;

5 a fourth step of continuously covering said inner surface of said via, said wiring layer formed on said second surface exposed within said via and that portion of the wiring layer which is formed on said first surface of said insulating layer and which is other
10 than said plating resist, by use of said first plating layer;

 a fifth step of laminating said second plating layer on said first plating layer and electrically connecting said wiring layer on said first surface and
15 said wiring layer and said second surface with said first and second plating layers; and

 a sixth step of removing said plating resist after an electric connection is completed between said wiring layers.

20 12. The method of manufacturing a printed wiring board according to claim 11, wherein in said second step, said via are formed by irradiating a laser at a position other than said wiring layer out of said first surface of said insulating layer and scraps off
25 said insulating layer in the direction from said first surface to said second surface by said laser.

 13. A method of manufacturing a printed wiring

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board, said method comprising:

5 a first step of obtaining said laminate having said insulating layer having said first surface and said second surface located on the opposite side of said first surface and a plurality of wiring layers laminated on said first surface and said second surface of said insulating layer and inside of said insulating layer and formed so as to correspond to a predetermined circuit pattern;

10 a second step of forming said via said one end of which is opened on said first surface of said insulating layer and the other end of which is closed by said wiring layer inside of said insulating layer on said laminate;

15 a third step of covering said second surface of said insulating layer and a region other than a portion where one end of said via is opened out of said first surface of said insulating layer as well as said wiring layers on said first and second surfaces with said plating resist;

20 a fourth step of continuously covering said inner surface of said via, said wiring layer inside of said insulating layer exposed within said via and a portion other than said plating resist out of said wiring layer on said first surface of said insulating layer with said first plating layer;

a fifth step of laminating said second plating

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layer on said first plating layer, and electrically connecting said wiring layer on said first surface and said wiring layer inside of said insulating layer by said first and second plating layers; and

- 5 a sixth step of removing said plating resist after an electric connection is completed between said wiring layers.

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